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AEOP Overview

ARMY EDUCATIONAL OUTREACH PROGRAM

Inspire…

Mobile Discovery Center
(4th – 9th grade)

Junior Solar Sprint (JSS)
(4th – 8th grade)

eCYBERMISSION
(6th – 9th grade)

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Inspire...Explore...

West Point Bridge Design Contest (6th – 12th grade)

Gains in the Education of Mathematics & Science (GEMS) (4th – 12th grade)

UNITE (9th – 12th grade)

Junior Science & Humanities Symposium (JSHS) (9th – 12th grade)

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Inspire…Explore…Achieve

Internships
(High School & College)

DoD Scholarship & Award Opportunities
(SMART and NDSEG)

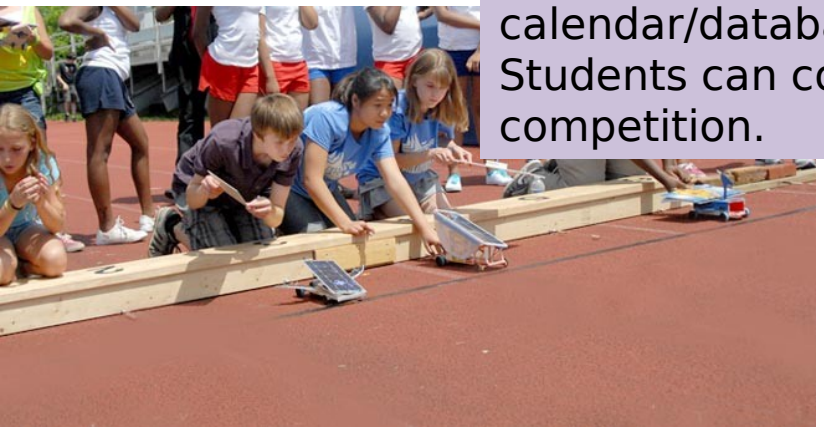
High School Apprenticeship Program(HRAP) & Undergraduate Research Apprenticeship Program (URAP)

Science and Engineering Apprentice Program (SEAP)

College Qualified Leaders (CQL)

Junior Solar Sprint (JSS)
(4th – 8th grade)

Junior Solar Sprint (JSS) is a free educational program for 4th through 8th grade students where students design, build and race solar powered cars. Students develop teamwork and problem solving abilities, investigate environmental issues, and gain hands-on Science, Technology, Engineering and Mathematics (STEM) skills to create the fastest most interesting, and best crafted vehicle possible. An online resource center includes STEM standards-based educational materials, supplementary instructional videos and webinars. An interactive calendar/database facilitates a national network of participants. Students can compete in local races or take part in an online competition.



Program Milestones

Oct – May: Online resources available
Nov: Online competition opens
Dec – Mar: Webinars and local training for students
Jan – Mar: Complete JSS lesson plans
Create design sketches and team journal
Purchase solar car kits
Mar – Apr: Online competition submissions judged
Apr – June: Participate in local regional JSS races

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http://jrsolarsprint.org/

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Mobile Discovery Center
(4th – 9th grade)

The National Science Center takes science on the road with its Mobile Discovery Centers (MDC). Housed in 18-wheelers, the mobile centers travel across the country, presenting programs designed to show young people that studying science and math is fun as well as essential to their future. The complete 50-minute program presented during van visits consists of hands-on, interactive science demonstrations. Up to six sessions can be scheduled each school day. The MDC is currently offered as a FREE Outreach Program provided by the National Science Center and the U.S. Army.

http://www.nscdiscovery.org/eo/outreachprograms/mobilediscovery.aspx

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eCYBERMISSION
(6th – 9th grade)

eCYBERMISSION is a web-based STEM competition for students in grades six through nine that promotes self-discovery and enables all students to recognize the real-life applications of science, math and technology. Using either the scientific method or engineering design process, teams of three to four students propose a solution to a real problem in their communities to compete for State, Regional and National Awards and recognition.

The U.S. Army is committed to answering the Nation's need for increased national STEM literacy and to expanding STEM education opportunities across the country to open doors to new career paths for American students that lead to a brighter tomorrow.

Program Milestones:

Aug – Jan:	Team Registration
Aug – Feb:	Teams Conduct Research & Experiments
Dec – Feb:	Mission Folder Submission
Feb – Apr:	Virtual Judging
Apr – May:	Regional Judging [Mid APR State Winners Announced]
June:	[Late APR Regional Winners Announced

https://www.ecybermission.com/public/Login.aspx?ReturnUrl=%2fDefault.aspx

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eCYBERMISSION STEM Tech Expo

“I got to see all kinds of technology I hadn’t seen before and it was very cool.” [Student]

“I wish we learn more like this in the classroom” [Student]

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Gains in the Education of Mathematics & Science (GEMS) (4th – 12th grade)

Gains in the Education of Mathematics and Science is an Army-sponsored, summer STEM enrichment program for elementary, middle and high school students that takes place in participating Army Research Laboratories. GEMS is driven by the overarching mission: to interest young people, who might not otherwise give serious thought to becoming scientists or engineers, in STEM careers early in their education so that they have the time to appropriate academic training.

Program Milestones

Jan -- Feb:	Student Application Opens (varies by site)
Mar -- Apr:	Applications Due
Apr -- May:	Application Reviewed & Participants Selected
May:	Selected Students Notified
June -- Aug:	Students Participate in GEMS program (length and dates vary by location)

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http://www.usaeop.com/programs/GEMS/index.htm

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West Point Bridge Design Contest
(6th – 12th grade)

The West Point Bridge Contest provides students with an opportunity to build realistic bridges using a free award winning software program. The contest is open to students age 13 through grade 12. A special Army-Navy version of the contest is open to students in grades 6-7.

The contest will provide you with an opportunity to:

- Learn about engineering through a realistic problem solving experience.
- Learn about the engineering design process.
- Learn about truss bridges and how they work.

Program Milestones

Aug-Dec:	Software Download and Student Practice
Jan:	Qualify Round Begins
Mar:	Semi-Final Round
May:	Final Round at West Point

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West Point Bridge Design Contest
bridgecontest.usma.edu

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Junior Science & Humanities Symposium (JSHS)
(9th – 12th grade)

JSHS is designed to challenge and engage students (Grades 9 – 12) in STEM. Individual students may apply to compete for scholarships and recognition by presenting the results of their STEM projects before a panel of judges and an audience of their peers. Opportunities for hands-on workshops, panel discussions, career exploration, research lab visits and networking benefit participating students. JSHS regional symposia are held at 48 nationwide university campuses and serve students in the 50 states, Puerto Rico, and the DoD Dependents Schools, Europe and Pacific.

Program Milestones

Sep -- Dec:	Student application process is open requiring application, abstract and paper
	Regional symposia deadlines vary
Jan -- Apr:	Regional symposia review of abstracts
Jan -- Apr:	& papers
	Regional symposia judging – Oral &
May:	poster presentations. Regional winners announced
	National JSHS held

http://www.jshs.org/

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UNITE
(9th – 12th grades)

UNITE is a four-to-six-week pre-collegiate summer program for talented high school students from groups historically underrepresented and underserved in STEM. Held at higher education institutions across the country, UNITE encourages college majors and careers in engineering in these students by giving them the opportunity to experience hands-on rigorous academics, enrichment, and career exploration –all in STEM fields.

Program Milestones

Mar -- May	Student Application Period
May -- June	Selected Students Notified
June -- Aug	Students Participate for 4-6 weeks at Colleges and Universities across the country

http://www.usaeop.com/programs/UNITE/index.htm

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Science and Engineering Apprentice Program (SEAP)

The Science and Engineering Apprentice Program (SEAP) matches practicing DoD scientists with talented high school students creating a direct mentor-student relationship that provides students with training that is unparalleled at most high schools. SEAP participants receive first-hand research experience and exposure to Department of Defense laboratories. SEAP fosters desire in its participants to pursue further training and careers in STEM. Selected ants receive a stipend of approximately $2000 -week program.

Program Milestones

Nov:	Student Application Opens
Late Feb:	Applications Due
Mar -- Apr:	Mentors Review Applications & Select Participants
Apr – May:	Selected Students Notified
June – Aug:	Students Participate for 8 weeks at DoD Laboratories

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http://www.usaeop.com/programs/SEAP/index.htm

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High School Apprenticeship Program(HSAP) & Undergraduate Research Apprenticeship Program (URAP)

HSAP

High School Apprenticeship Program

URAP

Undergraduate Research Apprenticeship Program

The High School Apprenticeship Program (HSAP) and Undergraduate Research Apprenticeship Program (URAP) provide high school students and undergraduates authentic science and engineering research experience with university researchers sponsored by the Army Research Office. Through this commuter program students will develop skills in Army critical science and engineering research areas in a university lab setting to prepare them for the next steps of their educational and professional career.

Program Milestones

Jan -- Feb: Applications Open

Apr – May: Participants notified & select

June – Aug: start date

July: Student research session (also Fall if necessary)

HSAP and URAP Research Showcase

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http://www.usaeop.com/programs/HSAP/index.ht

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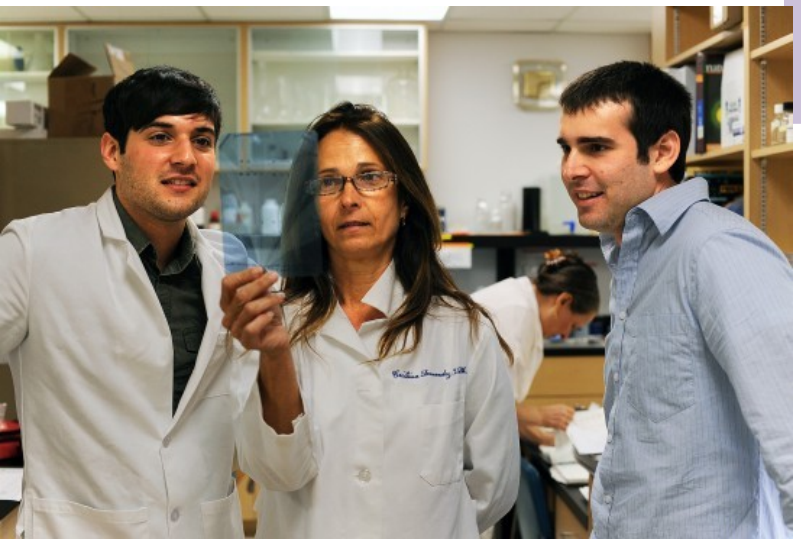
College Qualified Leaders (CQL)

The College Qualified Leaders (CQL) program matches practicing DoD scientists with talented college and graduate students creating a direct mentor-student relationship, providing participants with training that is unparalleled at most colleges. CQL students receive firsthand research experience and exposure to DoD laboratories. CQL fosters desire in its participants to pursue further training and careers in STEM. Selected participants receive a stipend based on education and experience and may participate year-round.



Program Milestones

Nov:	Application Opens
Late Feb:	Applications Due
Mar – Apr:	Mentors Review Applications & Select Participants
Apr – May:	Selected Students Notified
June – Aug:	Students Participate in CQL at DoD Laboratories

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http://www.usaeop.com/programs/CQL/index.htm

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Research & Engineering Apprenticeship Program (REAP)

REAP is a summer STEM program that places talented high school students, from historically under-represented and underserved groups, in research apprenticeships at area colleges and universities. REAP apprentices work under the direct supervision of a mentor on a research project. REAP apprentices are exposed to the real world of research, they gain valuable mentorship, and they learn about career opportunities in STEM. REAP apprenticeships are 5 – 8 weeks duration and apprentices receive a stipend.

Program Milestones

Jan:	Student Application Opens
Late Mar:	Applications Due
Apr -- Jun:	Selected Students Notified
July:	Students Apprentice for 5-8 weeks in College or University Laboratories

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http://www.usaeop.com/programs/REAP/index.htm

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Questions?

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